Prostate Cancer:

Can We Reduce Mortality While Preserving Quality of Life?

AT-A-GLANCE

1994–1995

"Quality of life issues are crucial in the decision making process. The patient's attitude towards cancer and its treatment, sexual concerns, cost issues, and the extent of family support all play a part."

Diane Blum, MSW, Psychosocial Support for the Man with Prostate Cancer.
Primary Care and Cancer (1990)

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

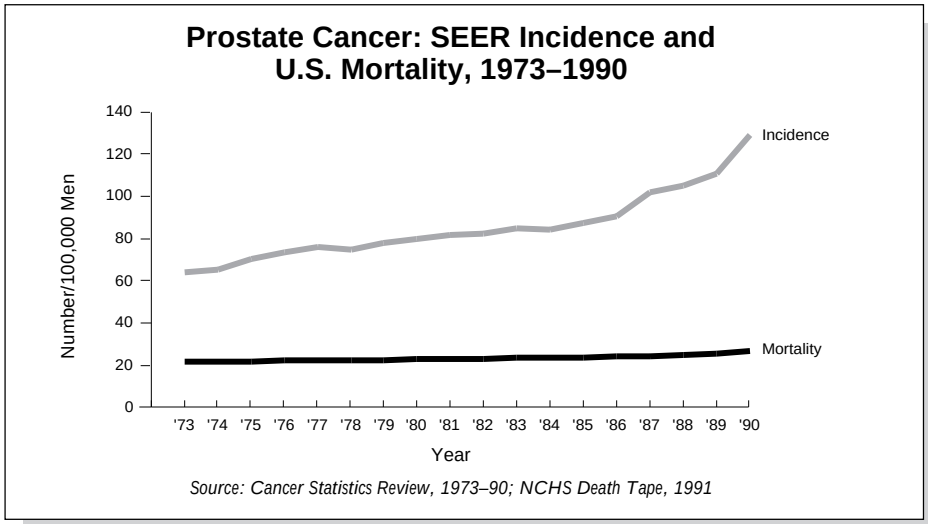
Prostate Cancer

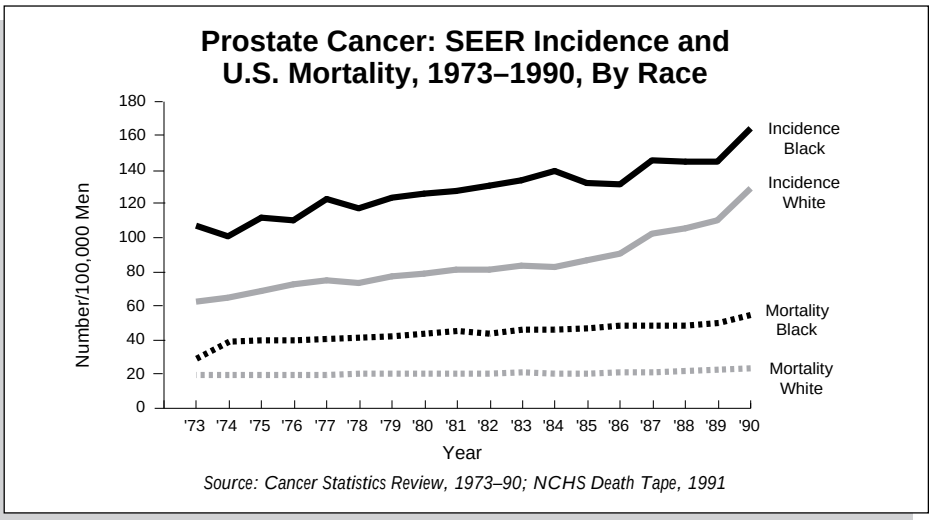
Prostate cancer is the most commonly diagnosed form of cancer among men in the United States. It is second only to lung cancer as a cause of cancer-related deaths. In 1994, an estimated 200,000 new cases of prostate cancer will be diagnosed and approximately 38,000 men will die, despite advances in surgical and medical therapy. Prostate cancer occurs at an age when other medical conditions such as heart disease and stroke may contribute significantly to the cause of death. Therefore, it is unknown how many men will die *with* prostate cancer rather than *from* it.

From 1973 to 1990, prostate cancer incidence among *all* men increased by 85 percent, and mortality rose by nearly 20 percent.

For African American men, who already have one of the highest incidence rates of prostate cancer in the world, the death rate rose by 35 percent from 1973 to 1990. At all ages, African American men die from prostate cancer more often than whites. Their cancers tend to be diagnosed at later stages and they have worse survival, even when diagnosed early. The reasons for these racial differences are unknown.

Increased screening and detection have likely contributed to the recent rise in prostate cancer incidence. For instance, cancer is often detected incidentally in patients undergoing surgery to treat benign enlargement of the prostate, a common condition in older men. Also, more frequent use of other improved diagnostic methods, such as blood testing, may raise the number of reported cases.

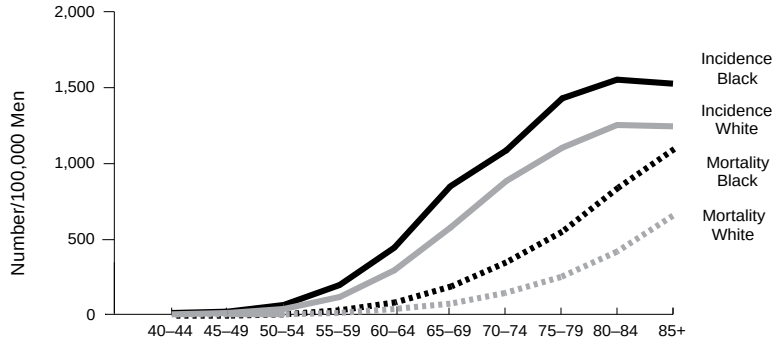




Who is at Risk?

Currently, prostate cancer is most common among men aged 65 and older, with a median age at diagnosis of 72 years. During his lifetime, an American man has about a 13 percent chance of being diagnosed with prostate cancer and a 3 percent risk of dying from it. The risks increase with age.

Prostate Cancer: Average Annual Age-Specific Incidence and Mortality Rates By Race, SEER and U.S. 1986–1990



Source: Cancer Statistics Review, 1973–90

Early Detection

Definitive risk factors amenable to primary prevention of prostate cancer are unknown, and effective measures to prevent the occurrence of this disease do not currently exist. Although one proposed method to prevent deaths from prostate cancer is through early detection, there is no consensus among health professionals on early detection guidelines. There is insufficient scientific evidence to prove that screening for prostate cancer reduces mortality, or even that treatment of early disease is more efficacious than no treatment at all in prolonging a patient's life. Currently it is not possible to accurately determine which cancers will progress to become clinically significant and which will not. Therefore, widespread screening and testing for early detection of prostate cancer are not scientifically justified at this time.

Three diagnostic tests are currently available for prostate cancer:

- Digital Rectal Exam (DRE) has been recommended for years as a screening test for prostate cancer. However, its ability to detect prostate cancer when it is present, is low. Small tumors often form in portions of the gland that cannot be reached on a DRE exam. It is also difficult to distinguish between benign abnormalities and prostate cancer with a DRE. Another disadvantage is that results may vary with the experience of the examiner.
- Prostate-Specific Antigen (PSA) is a blood test popular with many clinicians, but no clear medical consensus has been reached on its use and interpretation. PSA is an enzyme measured in the blood that rises with the presence of prostate abnormalities; however, it is difficult to differentiate between prostate cancer and benign growth of the prostate, which occurs naturally as a man ages. About 40 percent of men with significantly increased PSA levels who go on to receive further diagnostic testing, such as a biopsy and transrectal ultrasound (TRUS), in fact do not have cancer. Also, PSA fails to detect some prostate cancers. About 20 percent of patients with biopsy-proven prostate cancer have PSA levels within the normal range. In comparison to DRE, PSA has been shown to identify one-third more cancers, especially those not accessible to the examiner's finger. However, evidence also suggests that DRE may detect up to 20 percent of prostate cancers missed by PSA alone. Therefore, combining the tests may be better than either test alone.

- Transrectal Ultrasound (TRUS) is an imaging technique that is not usually recommended for screening purposes because of its poor ability to detect prostate cancer and its high cost. It is most often used as a secondary diagnostic test when other screening tests such as DRE and PSA are positive. TRUS can be used to estimate the size of the prostate to help interpret PSA values. It can also be useful in guiding biopsy.

Treatment Options

For patients diagnosed with advanced stage cancer that has spread beyond the prostate gland, treatment options are somewhat limited. In this case, patients may receive radiation therapy and/or hormonal therapy to inhibit further progression of the cancer. However, most metastatic tumors eventually become resistant to hormonal therapy. Some patients may be considered for participation in clinical trials.

For patients with early stage cancer that is confined to the prostate, there are several alternatives. However, the clinical staging of early disease has poor accuracy, complicating the decision to receive treatment.

Potential side effects of certain forms of treatment can adversely affect quality of life and should be considered in selecting appropriate management. Also, treatment is influenced by age and coexisting medical problems. There are three commonly recommended options for cancers confined to the prostate:

- Radical prostatectomy, or complete surgical removal of the prostate, is frequently recommended for patients under the age of 70 who are otherwise in good health. It is unusual for physicians to suggest radical prostatectomy if cancer has spread to pelvic lymph nodes or a distant site. Complications of radical prostatectomy may include both short and long-term consequences, such as pain from the procedure itself, impotence, and urinary incontinence. The risk for these complications increases with age. About 6 percent of men who have surgery will become incontinent, while about 35-60 percent of men will become incapable of sexual intercourse. It is estimated that most men who undergo this procedure experience at least a partial potency deficit.
- Radiation therapy, or treatment of the tumor site with low-level radiation, is usually recommended only for men with a confirmed pathological diagnosis of cancer that is clinically confined to the prostate and/or surrounding tissue. Side effects of radiation therapy can include acute inflammation of the bladder, rectum, and intestines, which is generally reversible. Chronic inflammation may result in strictures, which occasionally require surgical intervention.
- Watchful waiting is often suggested particularly for older men with small, low-grade tumors, for whom aggressive therapy and its unpleasant side effects may not be warranted because the disease is unlikely to spread. In such cases, the tumor must be periodically observed for changes that suggest more rapid growth. Recent studies have suggested that watchful waiting without early treatment may be anacceptable alternative for some men. However, it is still not known if detection of tumors that are fast growing will increase the chances for successful therapy.

Treatment should focus on minimizing the impact of the disease on the man's quality of life, preventing its spread to other parts of the body, and reducing mortality.

CDC Takes Action

State Partnerships

In 1993, Congress authorized the Centers for Disease Control and Prevention (CDC) to develop state-based demonstration projects for prostate cancer, working in tandem with existing cancer control efforts in state health departments. Fiscal year 1994 funding for CDC prostate cancer initiatives is $3.7 million.

Currently established in Central Harlem in New York and rural northwest Louisiana, the demonstration projects will obtain critical information that may be used to design early detection programs. The projects focus on the highest risk group: African American men.

Grantees will utilize innovative strategies to assess popular attitudes and beliefs about prostate cancer risk and screening, particularly among African American men age 50 to 75 years. These include household surveys conducted face-to-face in a random sample of homes; clinic surveys of men at primary care clinics; random telephone surveys; worksite surveys of men working with the largest employers in their area; and surveys at "stand alone sites" where men tend to congregate, such as churches, community centers, business fronts, and barbershops.

The surveys inquire about variables such as access to care, knowledge of risks and risk factors for prostate cancer, locus of control, screening history and practices, attitudes toward health care providers and medical institutions, institutional barriers to health communication and services, personal health priorities, trusted sources of information about health, reported health status and medical history, health beliefs, and health behaviors.

Grantees will also conduct a prospective quality-of-life study over time comparing patients who have received positive results from prostate screening with men who had negative results, and with men who were not screened at all. The study will assess determinants of patients' decision-making at critical junctures as they undergo treatment. The knowledge and attitudes of their primary health care providers will also be investigated to determine what factors influence a clinician's decision to recommend or not recommend prostate cancer screening, and which type of screening is suggested.

Projects planned for Massachusetts and Missouri will further refine and validate methods and instruments for assessing knowledge, attitudes, beliefs, and practices related to prostate cancer screening.

Traditionally, men have been difficult to reach with health messages and are unlikely to seek treatment.

Prevention Center Activities

CDC currently supports two programs at Prevention Centers, one at the University of California at Berkeley, and a second at the Harlem Center for Health Promotion and Disease Prevention, in conjunction with the New York State Department of Health and Columbia University. These projects are designed to assess the relationship between co-morbidities and possible competing causes of death among men diagnosed with prostate cancer. Their purpose is to determine how many men die from prostate cancer compared to those who die with the disease. Assessment measures will utilize both qualitative and quantitative methodologies.

"Is cure possible in those for whom it is necessary, and is cure necessary in those for whom it is possible?"

—Willet Whitmore, M.D.
Emeritus
Sloan Kettering Cancer Center
New York

Building Consensus

Professional medical organizations are divided on the issue of screening for prostate cancer. The U.S. Preventive Services Task Force (USPSTF) recommends against routine screening. CDC supports USPSTF recommendations. The American Cancer Society and the American Urological Association (AUA) recommend an annual DRE and PSA measurement beginning at age 50. For men of African American descent and those with a family history of prostate cancer, testing may start at a younger age. The AUA suggests these high risk groups begin testing at age 40.

In June 1993, CDC, the National Cancer Institute (NCI), and the Bureau of Medicine and Surgery (U.S. Navy) brought health care professionals together for the first time to discuss the difficult issues surrounding screening and early detection at the International Workshop on Early Detection of Prostate Cancer. In attendance was a broad representation of specialties including urology, internal medicine, oncology, radiology, family medicine, health administration, pathology, economics, biostatistics, and epidemiology.

Public health professionals have not yet developed a consensus on appropriate screening and detection messages for practitioners and the public. CDC hosted an international workshop to determine appropriate health education messages related to prostate cancer in September 1995.

The most appropriate and scientifically rigorous way to answer the controversial questions related to early detection and treatment is through randomized controlled trials (RCT). The NCI has already begun the Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial (PLCO), designed in part to answer the question of whether screening for prostate cancer actually reduces mortality in the population. CDC fully supports the PLCO Trial. The Veterans Administration is undertaking the Prostate Cancer Intervention Versus Observation Trial (PIVOT), a randomized trial designed to determine whether radical prostatectomy or expectant management is preferable for managing clinically localized prostate cancer. In Europe, RCTs have been initiated that are designed to answer the question of whether treatment of early, localized prostate cancer extends a man's symptom-free lifetime compared to no treatment.

Recovery

Physicians have become increasingly aware of the psychosocial aspects of prostate cancer and its treatment. Treatment has a direct and immediate effect on the patient *and* his spouse, and influences how they will live their lives. To this effect, many community education and support programs are springing up to help men and their partners make informed decisions that will suit their needs, desires, and lifestyles. Future research aims to examine these difficult issues and to explore the parameters of an "acceptable" degree of morbidity. Health professionals are realizing that the question is not merely how we can save a life — but how we can save a life and make it worth living.

> *"Prostate cancer requires the attention of social workers in health care for three reasons: the growing elderly population which will increase the number diagnosed, the recent introduction of new treatment, and the lack of social acceptability for this condition."*
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> John Sharp, MSSA, et al.: Elderly Men with Cancer: Social Work Interventions in Prostate Cancer. *Social Work in Healthcare, 1993.*

For more information, please contact the Centers for Disease Control and Prevention, Mail Stop K 64, 4770 Buford Highway NE, Atlanta, GA 30341–3724, (770) 488-4751.